30 October 1967

MEMORANDUM FOR: D/DCI/NIPE

SUBJECT: Suggested Characteristics for Systems Analysis Group

1. The primary need of SAG staff members is the possession of an objective, inquiring, and orderly mind. Credible program evaluation demands complete objectivity. But beyond that, the desire and capability to arrange complex factors in a systematic meaningful way implies a strong sense of order, and the desire to do so goes with an innate curiosity about how things fit together. I would go further and use the word analytical except for the sole mathematical connotation which might be implied. One should also be analytical in the sense that a lawyer or a judge is analytical, weighing the relevance and importance of a wide variety of factors to a decision or to an evaluation.

2. The second characteristic required has to do with a familiarity and dexterity with respect to certain technical skills. Basic mathematics through calculus as well as an understanding of statistical methods and probability are needed although technical skills can be acquired through consultation much easier than the factors of paragraph one.

3. My experience has led me to the belief that certain technical backgrounds and educational categories can be correlated with how well one does in systems analysis and program evaluation. Within the hard sciences, majors in physics or applied mathematics tend to do well, followed by engineers. Chemists, biologists, zoologists, whether a result of training or the personality which causes one to study these fields, do not on the average excel in systems analysis. In the non-hard sciences, recent economics

training is a productive background since there has been a growing emphasis on quantification of resources and resource planning. Perhaps surprising, a background in Law, coupled with a penchant for, or least an empathy with mathematics, has led to some outstanding careers in systems analysis. With just enough exceptions to prove the rule, no other non-hard scientific or other academic field has proved very productive of top rate systems analysts.

4. With respect to substantive intelligence analysts, if the analysts were impatient with the narrowness or detail which generally characterizes such work, then there should be a good chance to develop into a competent systems analyst. The primary transition required involves the capacity and urge to examine larger problems of generally wider scope, but the analytical approach appears to be much the same. Of course, possession of appropriate technical skills such as statistics and probability would be very helpful.

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